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INFORMATION REPORT

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THIS IS UNEVALUATED INFORMATION

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Transmitter Tubes

1. Up to 100,000 transmitter tubes TS-41 are to be produced at the Oberspreewerk (OSW); they will be used in the radar instrument "Freya" - Transmitter T. There is, however, a shortage of zircon, for the existing supply amounts to 25 Kg.

2. During the night of 3 - 4 May 1949, the tubes in the transmitter of the Berlin broadcasting station in Grünau went out of order. Major Ivanov, who was the Russian director of the broadcasting station and was also attached to the SMA, had procurred transmitter tubes from Moscow shortly before that time, but the use of these tubes would have necessitated rebuilding the transmitter. Since tubes which had been ordered from the OSW were completed by this time, it was possible to continue operation of the transmitter without interruption.

3. The new transmitter tubes are grid-controlled. They are capable of 150 KW but are set for 100 KW. Up to the present time, the new tubes have worked satisfactorily. As soon as the Eastern Zone requirements are met, additional tubes are to be produced for export.

4. Difficulties with deliveries as a result of the blockade have been overcome to a considerable extent. With regard to Hydrokollag, which is used in making the AL4 tubes, and zircon which is used in the transmitter tubes TS-41, all difficulties have been eliminated. On the other hand, deliveries of barium acid, which is used in stabilizers, are still difficult to make because of the fact that Dynamit AG in Troisdorf, the firm which handles these deliveries and which is located in the Western Zone, is to be dismantled.

5. The newly developed R-566 transmitter tube of 150 KW is now to be produced with the corresponding rectifiers in sets of 100 for the use of the Eastern Zone broadcasting station and for the broadcasting stations of the satellite countries. Production for export is also to be carried on. From tests which were made in the Berlin broadcasting station, it appears that the new tubes are superior to those previously produced. Principally as a result of the improved vacuum, the warming-up time of the tubes will be shortened; furthermore, the "Ueberschläge" during broadcasts have been substantially decreased.

X-Ray Tubes

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6. OSW has abandoned the production of X-ray tubes inasmuch as the cost of such production is too great. In the future it will be the only factory producing

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X-ray rectifiers. The Telefunkenwerk factory at Erfurt produces only high frequency rectifiers as a special product.

7. A previous order for incandescent tubes is henceforth to be divided up so that OSW is to produce only 1,000 W and 2,000 W tubes. The Siemans factory at Plauen is to produce 5,000 W and 10,000 W tubes.

8. The SMA forbade OSW to deliver wolfram to other firms on the ground that various changes within the German Economic Commission (DWK) had become necessary. OSW was to produce molybdenum wire in large quantities instead of wolfram wire. Later, without any explanation, the SMA suspended this prohibition against deliveries of wolfram wire until further notice. Moreover, OSW is to increase the production of wolfram wire, and for that purpose, it has already ordered new wire-drawing machines, hammering machines, reduction ovens, and annealing furnaces.

9. The raw materials for the production of wolfram wire are supplied by I.G. Farben in Bitterfeld; these consist of wolframite and scheelite. The present inventory at OSW amounts to 6 tons to meet a yearly consumption of 3.6 tons.

10. Wolfram wire is produced in the following way: The raw material is reduced to WO_3; one part of this is mixed with three parts of a solution of water and ammonia. Paratungstate is then separated from this solution. The parasalt is sucked off, dried, and heated. Finally, the WO_3 acid is saturated and then annealed. After the straining of the saturated W-acid, the reduction to W_2O_5 takes place. Finally, the second reduction to W-powder follows.

11. Waste during the course of production:

From wolframite to wolfram acid.....60%
From wolfram acid to WO_3.....85%
From WO_3 to wolfram powder.....80%

Wolfram acid weighing 3.5 tons yields an average of 2.8 tons of wolfram metal.

12. Duration of the various processes:

From WO_3 to solution	24 hours
Precipitation of paratungstate from solution	24 hours
Sucking off the parasalt	24 hours
Drying the salt at 150°	24 hours
Preheating	24 hours
Saturation of WO_3	8 hours
Postannealing process	24 hours
Straining of wolfram acid	8 hours
Reduction of wolfram acid	8 hours
Sifting into powder	8 hours
Second reduction	8 hours
Second sifting	8 hours

13. The powder which has thus been obtained is then passed through a hydraulic [redacted] hours. The bars are then hammered down to 1.2 mm. in the following manner:

Hammering for 15 minutes after previous preheating at 1400° in 25 steps down to a 7.5 mm. diameter.
Hammering for 15 minutes after previous preheating to 1400° in 11 steps down to a 4.5 mm. diameter.

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Hammering after heating, as above, in 11 steps down to a 2.5 mm. diameter.
Hammering after heating, as above, in 15 steps down to a 1.2 mm. diameter.

The wire is drawn roughly down to 0.24 mm. in 25 operations and finally drawn finely down to 0.12 mm. in 40 operations.

Electron Microscopes

14. [redacted] 1946, secret development of the electron microscope has been continued [redacted]hardt, who formerly worked on it with Ruskas. Up to the present time, [redacted]these microscopes have been completed, of which three have been sent [redacted]and the fourth is kept at OSW for carrying out further research.

15. [redacted]ow a substantial improvement as compared to previous develop- [redacted] presumably be an overall increase of 50,000 units. It is [redacted] increase of 60,000 instruments will be attained in the [redacted]ent. Since, presumably, the tools will also be made avail- [redacted]n use, the DWK intends to invest 500,000 Marks. Some precision [redacted] have already been procured in order to make greater production [redacted]ble.

[redacted]ications Equipment

16. [redacted]r worth [redacted] month [redacted]

17. [redacted]astern Zone of Berlin, OSW is supervising and repairing telephone in- [redacted] in p[redacted] SAGs, state-owned plants, and government buildings.

[redacted]and

18. [redacted] guard [redacted]ists of 50 men who are selected from a total of abo[redacted]0 worker[redacted]d now comes under the command of the police in K[redacted]penhagen, where it [redacted]d, armed, and trained.

19. About 50 engineers, [redacted], and draftsmen, who all live in the western sectors of Berlin, r[redacted]es of dismissal. The official reason given for their dismissal [redacted]l reduction in management.

20. [redacted]the personnel [redacted] OSW and a member of the SED, was suddenly dis- [redacted]. It is not kn[redacted]as dismissed. Loschmanov, the Russian director, [redacted]nce in h[redacted]ouse arrest followed. Subsequently, the SED [redacted]ment w[redacted]oth as technical and personnel manager; his [redacted]know[redacted]

21. Th[redacted] [redacted]pert for "rare earths", was brought about by his [redacted]losive materials, which caused an explosion blindin[redacted]

22. Thouret, wh[redacted]izers and impulse tubes for OSW, resigned in December 1948, [redacted]ith the firm of Heräus in Frankfurt/Main and is developing an[redacted]use in night photography.

23. Schubert, the leader [redacted]"General Technology", has been arrested as he is alleged to have [redacted]et chemical processes to a foreign power. Dr. Schwech was appoint[redacted]e him. Schulz, managing engineer, has been arrested for reasons w[redacted]yet known. These arrests, which are the first to occur within the pa[redacted] caused considerable agi[redacted]

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